

Office of Water Resources Update

October 22, 2019

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Alabama Office of Water Resources

2015 Water Use in Alabama & Surface Water Assessment Update

OWR Technical Reports



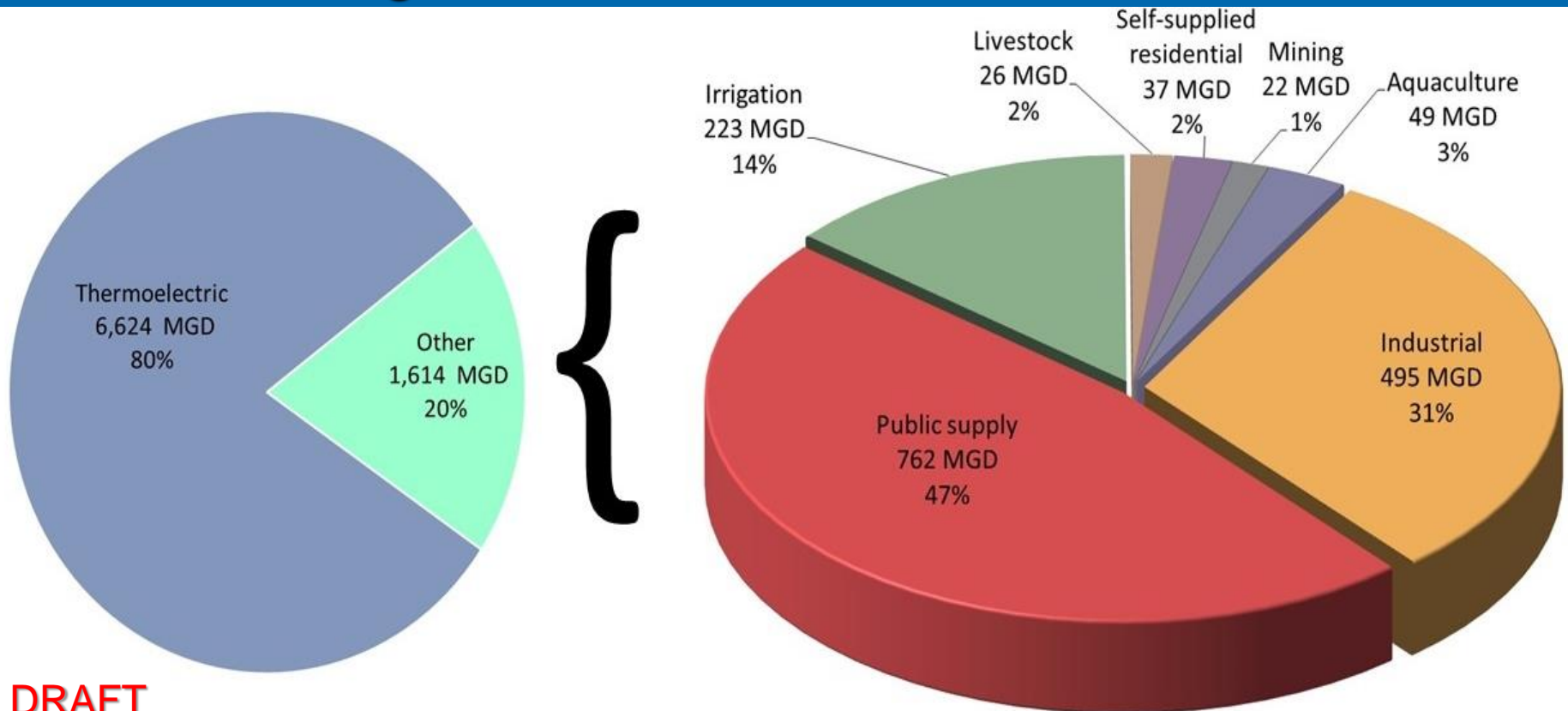
Demand Analysis Methodologies

➤ Withdrawals

- 8 sectors of water use – public supply, domestic, irrigation, livestock, aquaculture, mining, industrial, and thermoelectric-power
- Follows previous OWR and USGS water census process
- Primary source – OWR eWater database
 - Other sources include USDA-NASS, USGS, AGI, ADEM, and OWR surveys

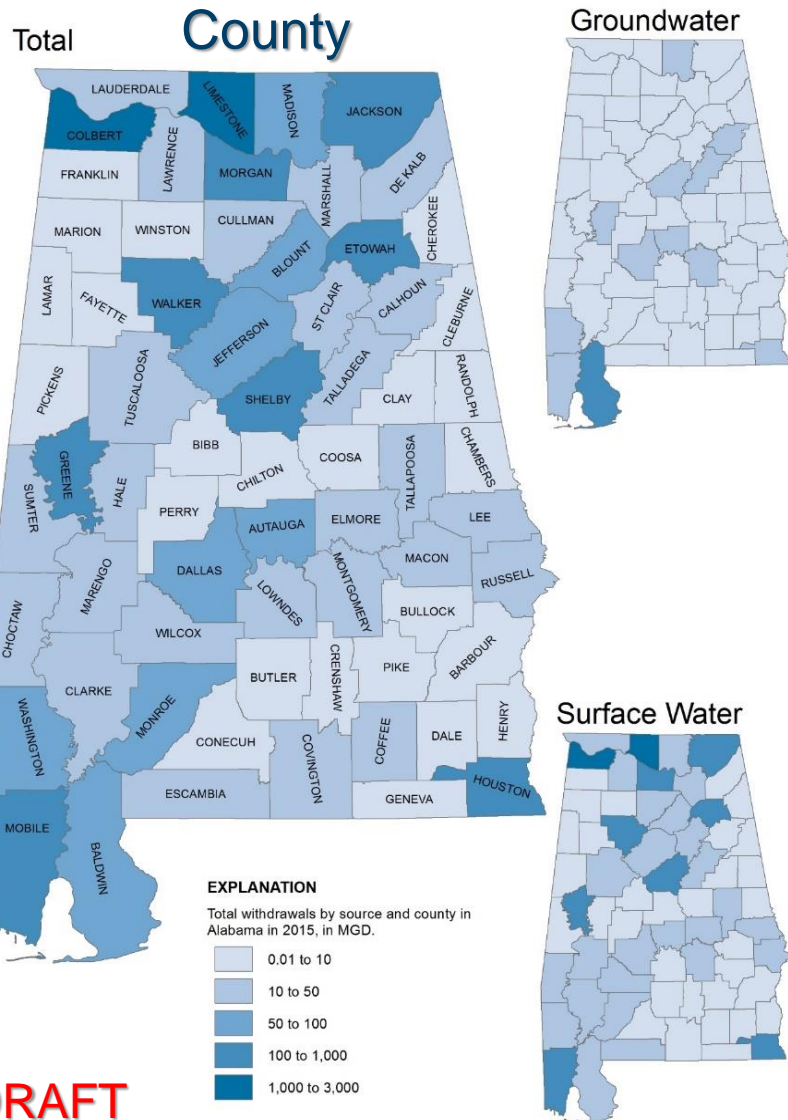
2015 Water Withdrawals

- Total Withdrawals – 8,239 MGD
 - 94 % Surface water
 - 6 % groundwater

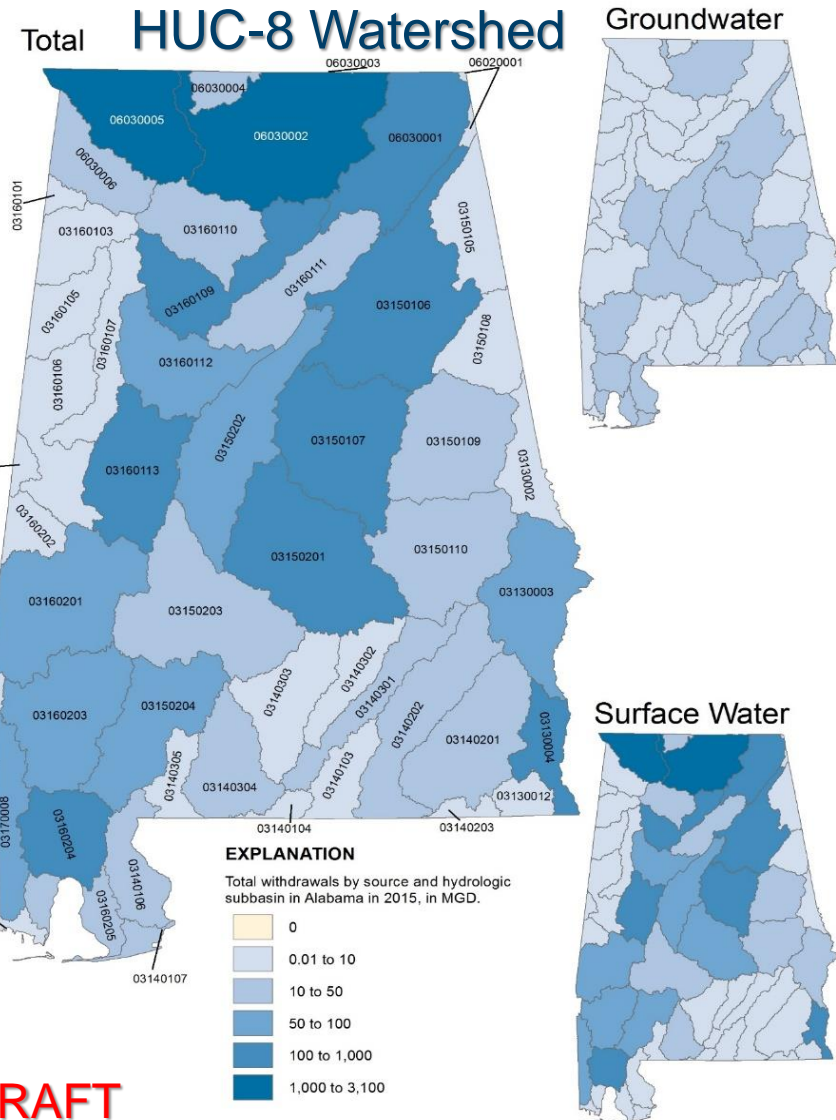


2015 Water Withdrawals

County and Subbasin Analysis



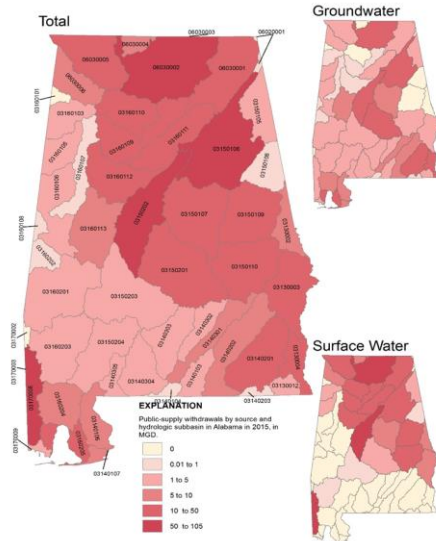
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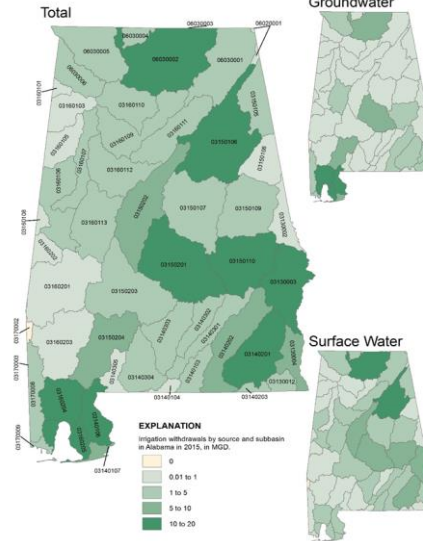
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2015 Water Withdrawals by Sector

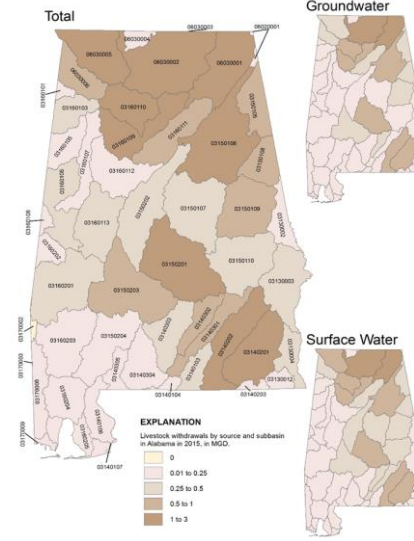
Public Supply



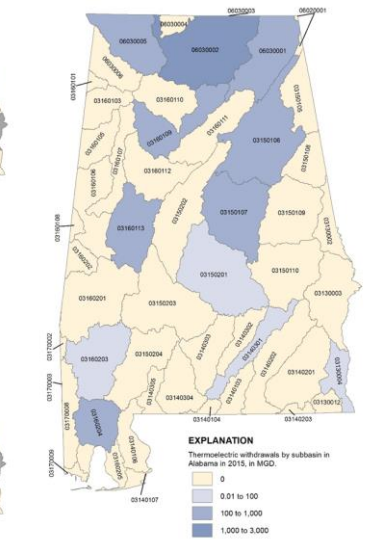
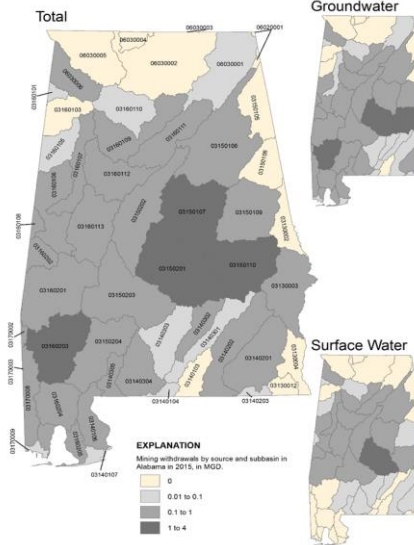
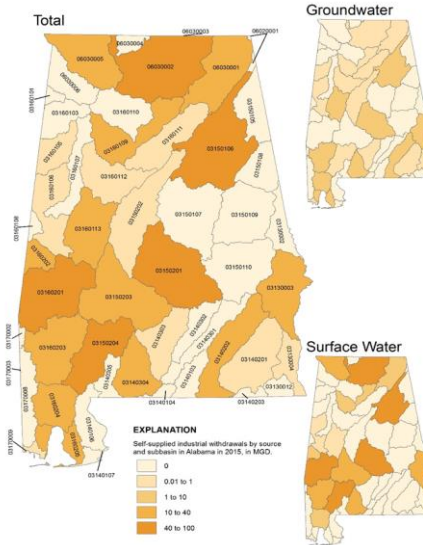
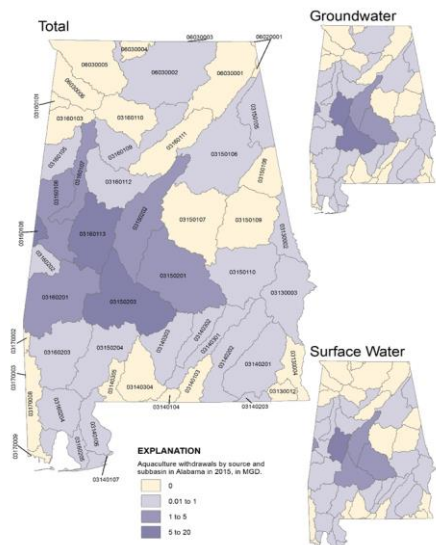
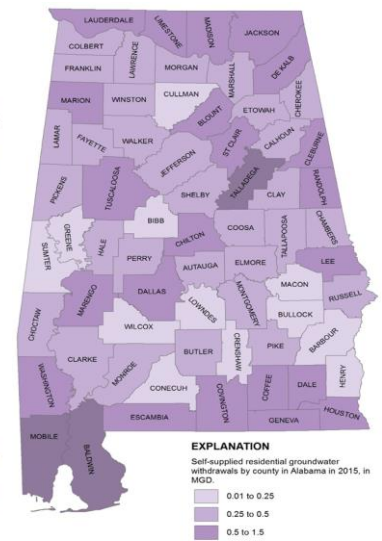
Irrigation



Livestock



Residential (Self-Supplied)



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Aquaculture

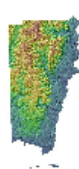
Industrial (Self-Supplied)

Mining

Thermoelectric

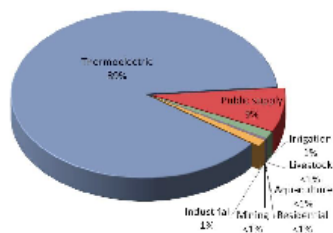
2015 Water Withdrawal Summaries

MOBILE



Population 415,395
Pop served by public supply 377,074

Withdrawals, in Million Gallons per Day				Withdrawals by Public Supplier, in MGD			
Category	GW	SW	Totals	System Name	GW	SW	Total
Public Supply	13.49	52.64	66.13	Bayou La Batre Utilities Board	0.59	0.00	0.59
	20%	80%		Dauphin Island Water and Sewer Authority	0.57	0.00	0.57
Residential	2.72	0.00	2.72	Grand Bay Water Works Board	0.87	0.00	0.87
	100%	0%		Kushla Water District	0.47	0.00	0.47
Irrigation	8.67	2.27	10.94	Le Moyne Water System, Inc.	0.40	0.00	0.40
	79%	21%		MCB Water Authority, Inc.	0.18	0.00	0.18
Aquaculture	0.00	0.01	0.01	Mobile Board of Water and Sewer Commissioners	0.00	52.64	52.64
	0%	100%		Mobile County W & F Protection Authority	3.03	0.00	3.03
Livestock	0.10	0.13	0.23	Mount Vernon	0.16	0.00	0.16
	43%	57%		Saraland Water System	1.52	0.00	1.52
Industrial	6.49	3.61	10.10	Satsuma	0.52	0.00	0.52
	64%	36%		South Alabama Utilities	4.01	0.00	4.01
Mining	0.22	0.00	0.22	St. Elmo - Irvington Water Authority	0.81	0.00	0.81
	100%	0%		Turnerville Water & Fire Protection District	0.36	0.00	0.36
Thermoelectric	0.00	693.70	693.70				
	0%	100%					
Totals	31.68	752.37	784.05				
	4%	96%					

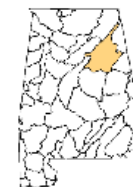
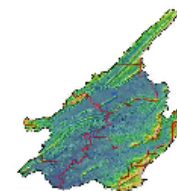


Withdrawals by North American Industry Classification, in MGD			
Industry Group	GW	SW	Total
Electric Power Generation, Transmission and Distribution	0.00	693.70	693.70
Utility System Construction	0.10	0.00	0.10
Seafood Product Preparation and Packaging	0.00	0.00	0.00
Fabric Mills	1.30	0.00	1.30
Petroleum and Coal Products Manufacturing	0.57	0.00	0.57
Basic Chemical Manufacturing	1.99	0.00	1.99
Pesticides, Fertilizer, and Other Agricultural Chemical Manufacturing	0.51	0.00	0.51
Paint, Coating, and Adhesive Manufacturing	1.75	0.00	1.75
Iron and Steel Mills and Ferroalloy Manufacturing	0.26	3.61	3.87
Other Support Activities for Transportation	0.02	0.00	0.02

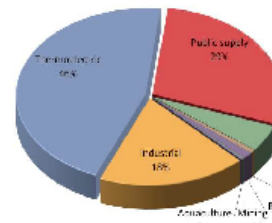
Subbasin number - Subbasin name

03150106-Middle Coosa

Area (Thousand Acres) 2,582
Estimated Population (2015) 355,811
Subregion: Alabama



Withdrawals, in Million Gallons per Day (MGD) and percent (%)				Withdrawals by Public Supplier, in MGD			
Category	GW	SW	Totals	System Name	GW	SW	Total
Public Supply	36.18	27.70	63.88	Anniston Water Works and Sewer Board	15.28	0.74	16.02
	57%	43%		Ashville Water and Sewer	0.21	0.32	0.53
Residential	2.75	0.00	2.75	Attalla Water Works Board	1.28	0.00	1.28
	100%	0%		Big Wills Water	0.23	0.00	0.23
Irrigation	0.54	10.84	11.38	Calhoun County Water Authority	2.96	0.00	2.96
	5%	95%		Childersburg Water, Sewer & Gas Board	0.26	0.00	0.26
Aquaculture	0.15	0.12	0.26	City of Talladega Water and Sewer Department	2.90	0.52	3.42
	55%	45%		Coosa Valley Water Supply District	0.00	2.26	2.26
Livestock	0.70	0.87	1.57	Fort Payne Water Works Board	0.00	4.82	4.82
	44%	56%		Gadsden Water Works & Sewer Board	0.00	12.73	12.73
Industrial	1.72	40.98	42.71	Glencoe Water and Sewer Works	0.42	0.00	0.42
	4%	96%		Hokes Bluff Water Board	0.75	0.00	0.75
Mining	0.69	0.10	0.79	Jacksonville Water Works & Sewer Board	0.00	1.17	1.17
	87%	13%		Lincoln	1.39	0.00	1.39
Thermoelectric	0.00	105.52	105.52	Munford Water Authority, Inc.	0.31	0.00	0.31
	0%	100%		New London Water Authority	0.66	0.00	0.66
Totals	42.73	186.13	228.86	Odenville Utilities Board	1.22	0.00	1.22
	19%	81%		Oxford Water Works and Sewer Board	3.70	0.00	3.70



Withdrawals by North American Industry Classification, in MGD			
Industry Group	GW	SW	Total
Beverage Manufacturing	0.43	0.00	0.43
Cement and Concrete Product Manufacturing	0.00	6.10	6.10
Electric Power Generation, Transmission and Distribution	0.00	105.52	105.52
Foundries	0.22	0.00	0.22
Poultry and Egg Production	0.57	0.00	0.57
Pulp, Paper, and Paperboard Mills	0.50	26.59	27.08
Rubber Product Manufacturing	0.00	8.30	8.30

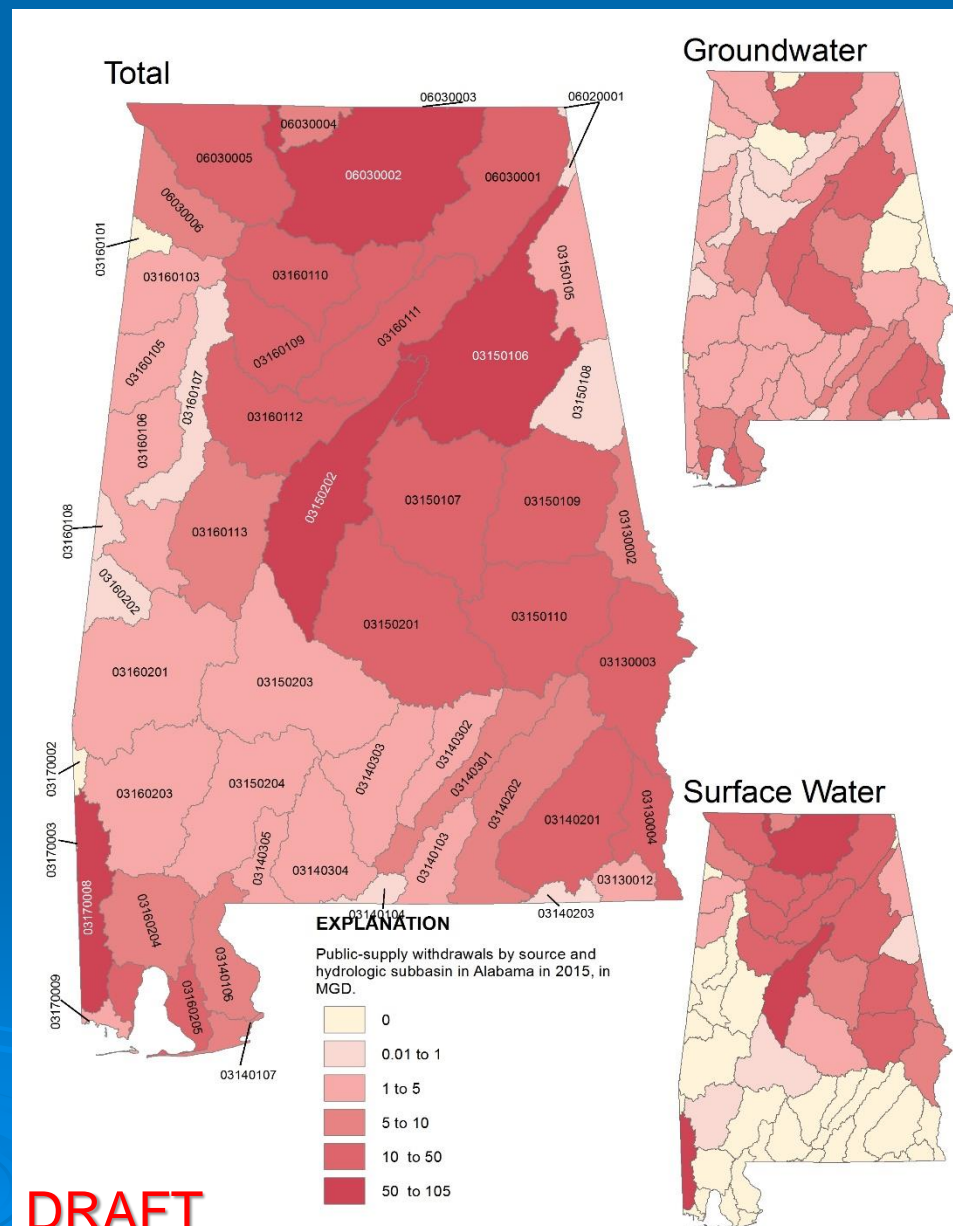
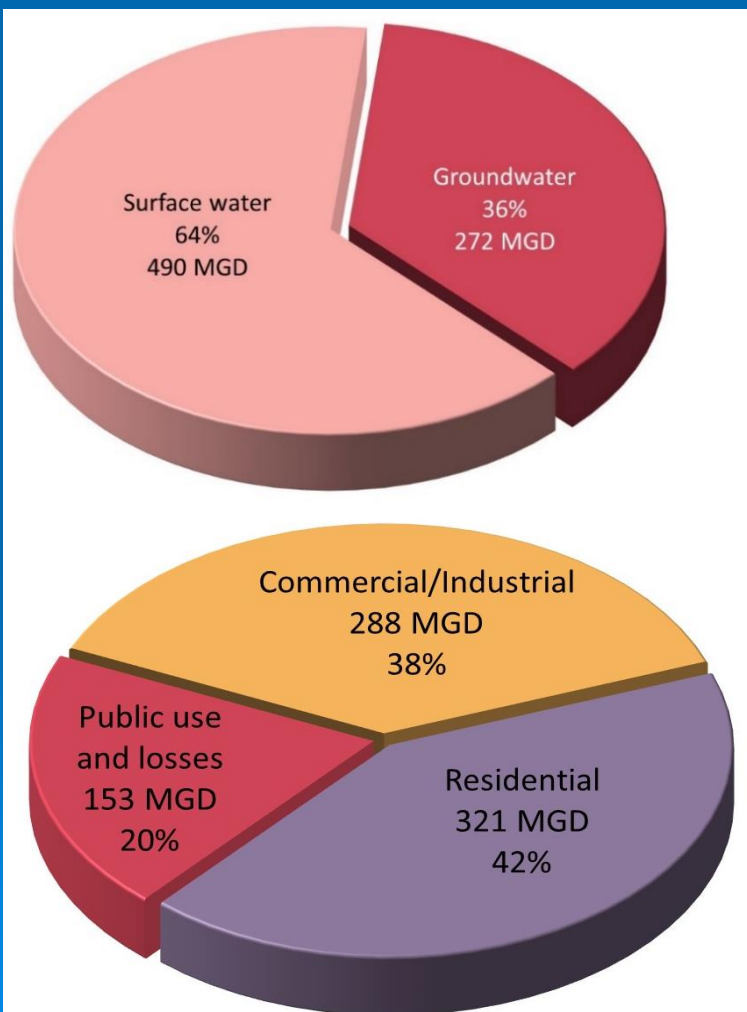
Withdrawals by North American Industry Classification, in MGD			
Industry Group	GW	SW	Total
Beverage Manufacturing	0.43	0.00	0.43
Cement and Concrete Product Manufacturing	0.00	6.10	6.10
Electric Power Generation, Transmission and Distribution	0.00	105.52	105.52
Foundries	0.22	0.00	0.22
Poultry and Egg Production	0.57	0.00	0.57
Pulp, Paper, and Paperboard Mills	0.50	26.59	27.08
Rubber Product Manufacturing	0.00	8.30	8.30

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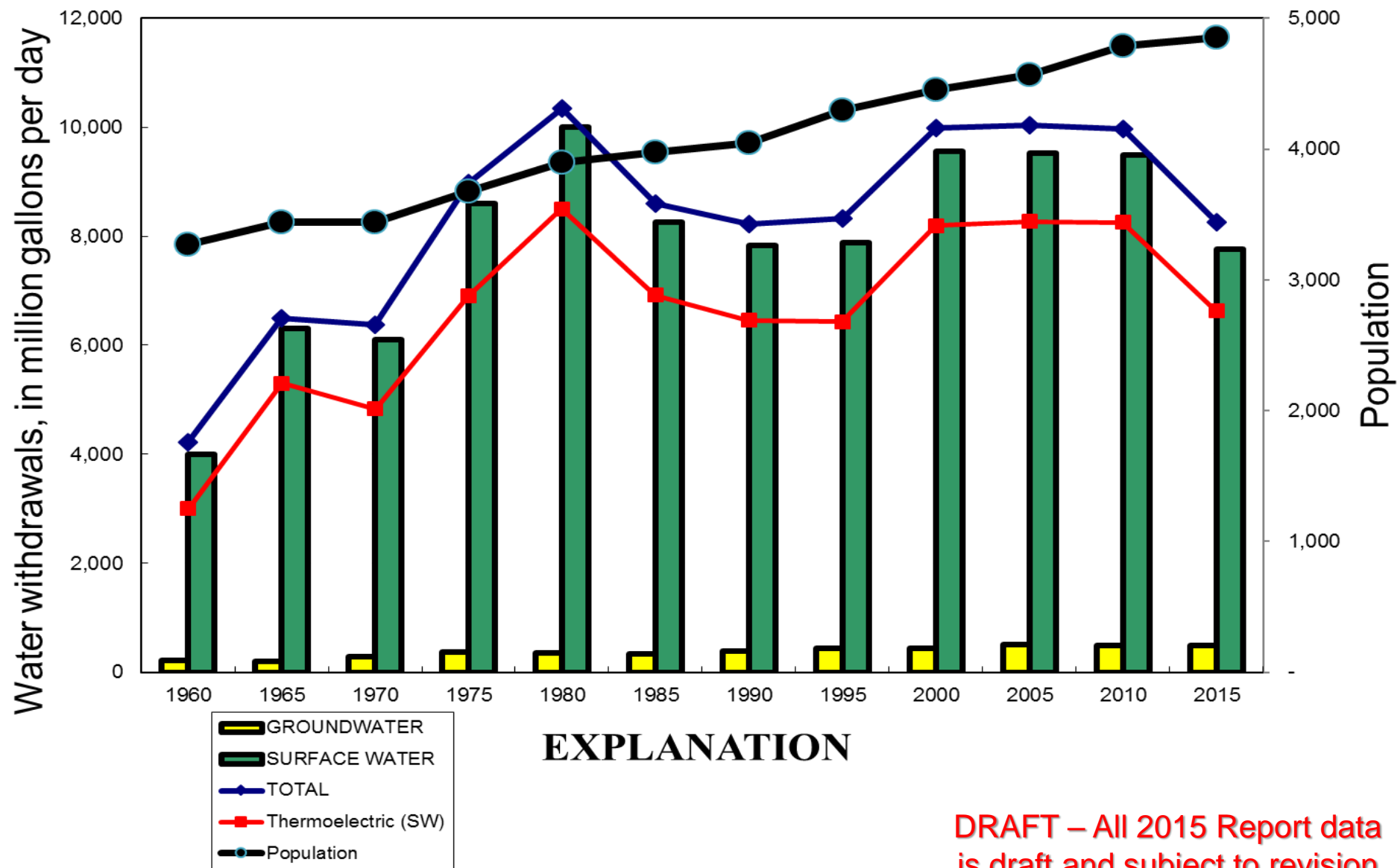
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2015 Public-Supply Withdrawals

- Total public-supply withdrawals:
762 MGD



Water Use Trends (1960 – 2015)



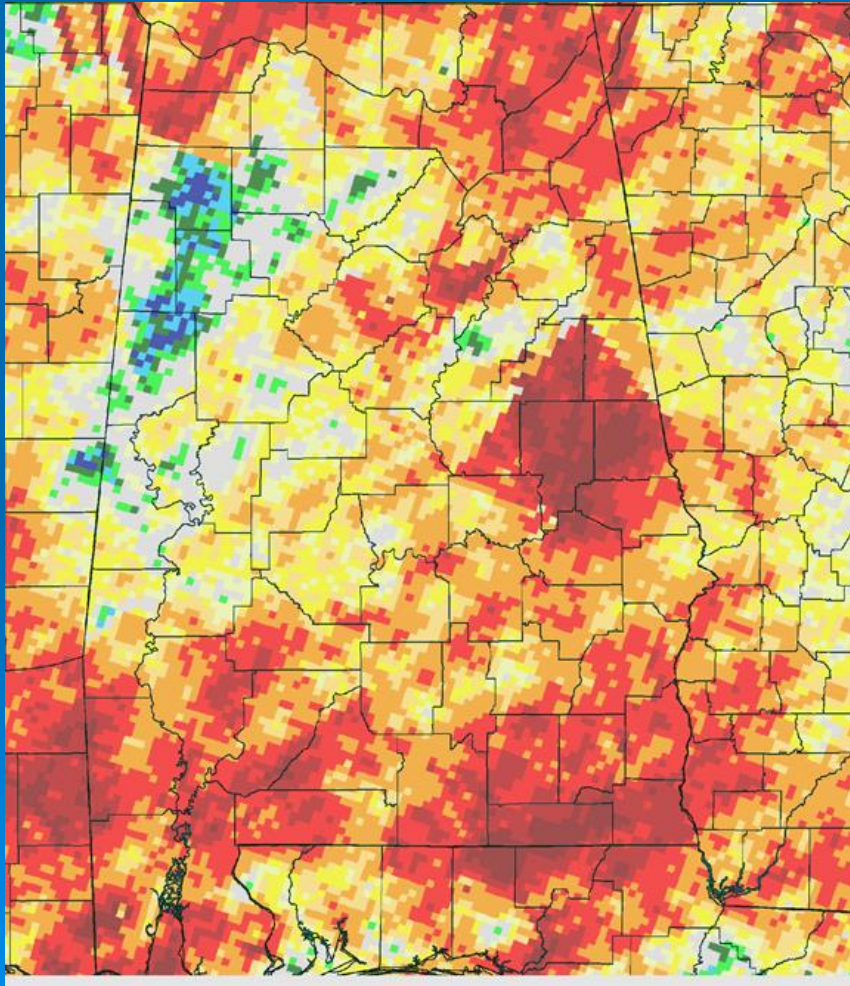
Surface Water Assessment Update

Comparison of 2010 and 2015 Departure from Normal Precipitation

January 01, 2010 Annual Departure Precipitation

Created on: August 31, 2018 - 16:45 UTC

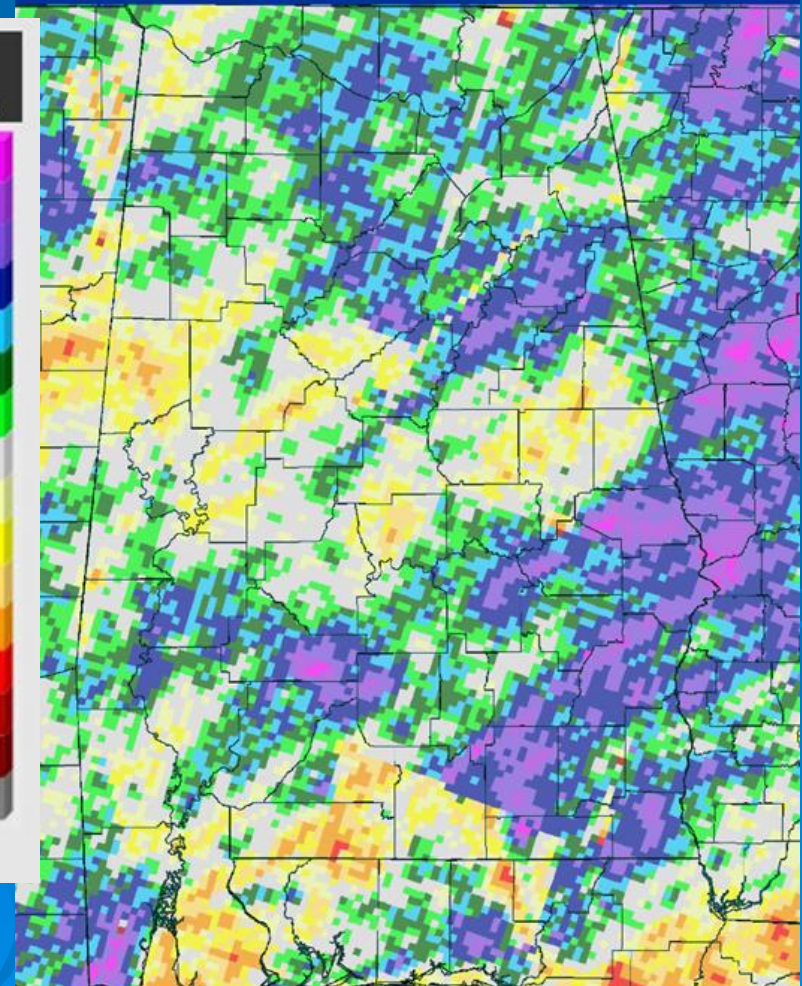
Valid on: January 01, 2011 12:00 UTC



January 01, 2015 Annual Departure Precipitation

Created on: August 31, 2018 - 16:47 UTC

Valid on: January 01, 2016 12:00 UTC



2015 Water Use & Surface Water Assessment in Alabama

➤ Water Withdrawals

- Historical process and methodologies

➤ Surface Water Assessment

- Estimate returns and net consumption

➤ Returns

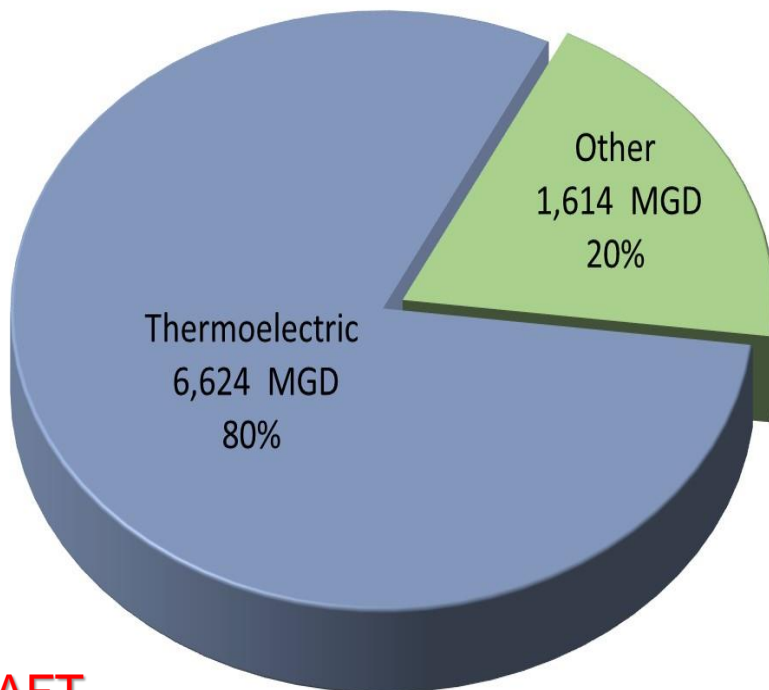
- 2 sectors of water returns – public supply and industrial, mining, and thermoelectric power.
 - Irrigation sector was assumed 100% consumptive,
- Sources of data – eWater (OWR) and ECHO



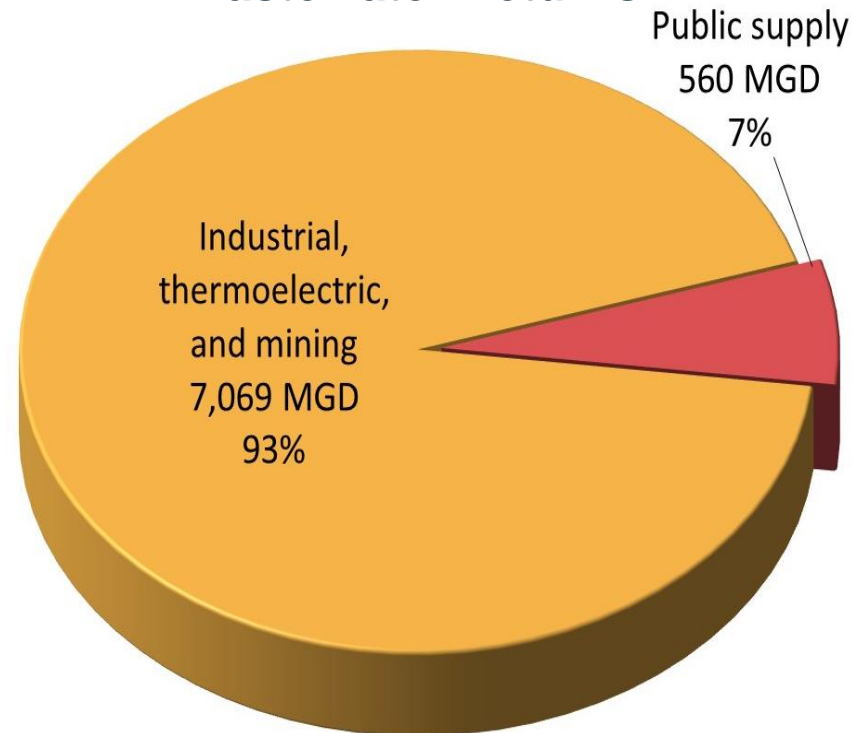
2015 Water Use

Total Withdrawals –	8,239 MGD
Total Returns –	7,629 MGD
GW Withdrawals –	496 MGD
Total SW Consumptive Use –	115 MGD

Withdrawals



Wastewater Returns

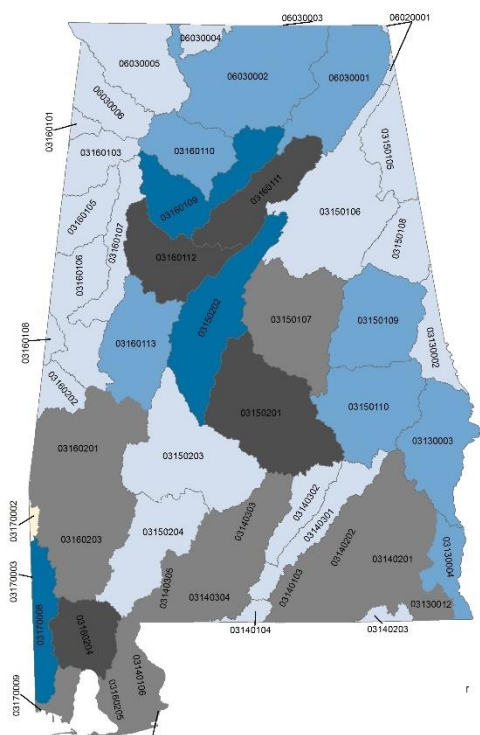


2015 SW Consumptive Use

- Total SW Consumptive Use: **115 MGD**
- Public Supply: **-70 MGD**
 - Returns from groundwater account for portion of returns
- Agriculture: **161 MGD**
 - Aquaculture, irrigation, livestock
- Industrial, Thermoelectric-Power, and Mining: **24 MGD**

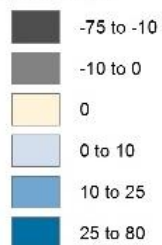
2015 Consumptive Use

Total

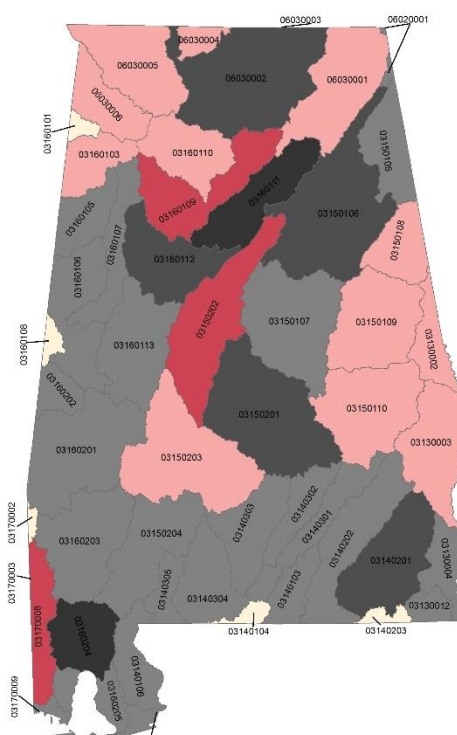


EXPLANATION

Total net demand by subbasin in Alabama for 2015, in MGD.

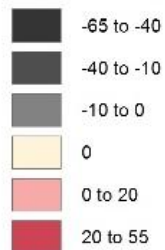


Public Supply

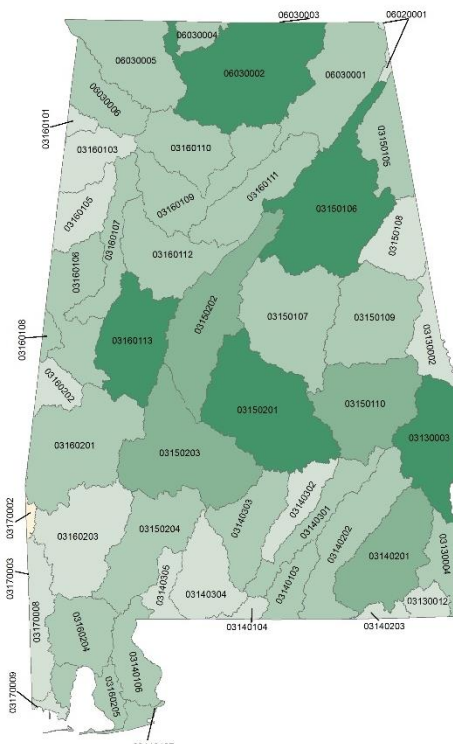


EXPLANATION

Public-supply net demand by subbasin in Alabama for 2015, in MGD.

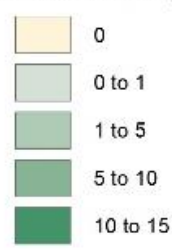


Agriculture

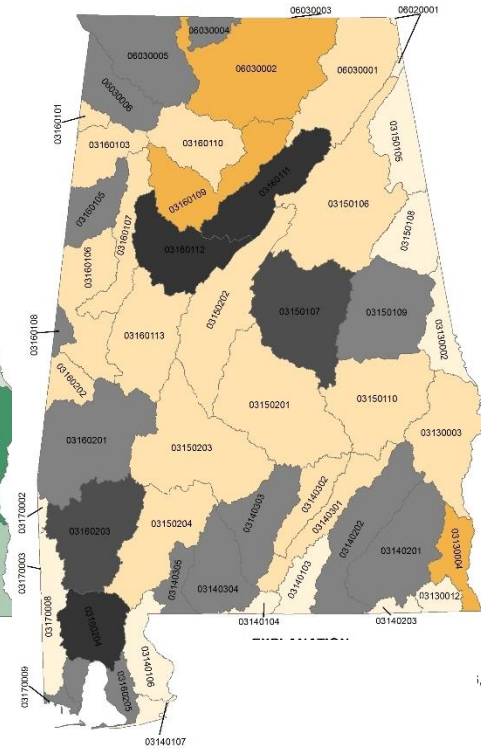


EXPLANATION

Agriculture net demand by subbasin in Alabama for 2015, in MGD.

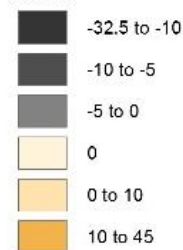


Industrial and Power



EXPLANATION

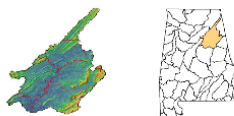
Industrial, thermoelectric-power, and mining net demand by subbasin in Alabama for 2015, in MGD.



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Subbasin number - Subbasin name
03150106-Middle Coosa

Area (Thousand Acres) 2,582
Estimated Population (2015)* 355,811
Subregion: Alabama



2015 Demands

Withdrawals														
Category	Source	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	AVG
Public Supply/Residential	GW	38.02	38.81	37.48	36.39	39.41	41.24	42.30	42.60	39.51	38.15	37.24	35.95	38.93
Public Supply	SW	27.65	27.36	26.03	26.11	28.04	30.08	30.51	30.92	28.55	26.76	25.34	25.04	27.70
Industrial/Mining	GW	2.37	2.31	2.40	2.27	2.40	2.53	2.41	2.46	2.41	2.43	2.52	2.43	2.41
Industrial/Mining	SW	38.87	40.83	36.06	33.38	45.02	45.40	41.93	44.69	43.40	38.34	39.61	45.40	41.09
Thermoelectric	SW	98.21	137.20	128.84	96.27	110.07	105.62	92.10	96.13	108.40	102.43	95.03	98.41	105.52
Agriculture	GW	0.97	0.98	1.11	1.22	1.60	2.11	2.18	1.86	1.35	1.23	1.02	0.97	1.39
Agriculture	SW	2.19	4.57	6.23	9.36	15.03	19.92	20.58	20.82	16.91	13.90	7.22	4.70	11.83
Total	GW	41.35	42.10	40.99	39.89	43.42	45.88	46.90	46.92	43.27	41.80	40.77	39.35	42.73
Total	SW	166.93	209.95	197.16	165.12	199.16	201.01	185.11	192.57	197.26	181.43	167.20	173.55	186.13

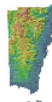
Returns														
Category		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	AVG
Public Supply		52.32	47.38	57.87	69.23	35.42	34.21	28.84	29.06	25.55	25.78	46.07	60.40	42.78
Industrial/Mining		33.28	29.00	27.98	25.94	31.48	29.97	37.91	36.48	53.10	40.52	38.95	40.91	35.46
Thermoelectric		97.84	136.85	122.52	95.84	108.50	105.27	93.85	95.98	108.05	102.08	94.94	97.93	104.97
Agriculture		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Returns		183.45	213.43	208.37	191.00	175.40	169.45	160.61	161.52	186.70	168.38	179.96	199.31	183.13

03150106-Middle Coosa

Total SW Withdrawals	SW	166.93	209.95	197.16	165.12	198.16	201.01	185.11	192.57	197.26	181.43	167.20	173.55	186.13
Total GW Withdrawals	GW	41.35	42.10	40.99	39.89	43.42	45.88	46.90	46.92	43.27	41.80	40.77	39.35	42.73
Withdrawal Total		208.28	252.05	238.15	205.01	241.58	246.89	232.01	239.49	240.53	223.23	207.97	212.90	228.86
Total Returns		183.45	213.43	208.37	191.00	175.40	169.45	160.61	161.52	186.70	168.38	179.96	199.31	183.13
Net SW (MGD)	SW	-16.52	-3.48	-11.21	-25.48	22.76	31.56	24.50	31.05	10.56	13.05	-12.76	-25.76	3.00

MOBILE

Population 415,395
Pop served by public supply 377,074



2015 Demands

Withdrawals														
Category	Source	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	AVG
Public Supply/Residential	GW	15.73	14.92	15.54	15.73	17.16	17.65	17.29	17.16	17.06	16.27	14.94	14.89	16.20
Public Supply	SW	51.06	47.87	49.68	51.98	55.62	58.12	49.29	56.91	54.49	53.33	52.82	50.32	52.64
Industrial/Mining	GW	6.61	6.54	6.92	6.71	6.44	6.90	6.59	6.89	6.63	6.55	6.86	6.89	6.71
Industrial/Mining	SW	3.22	3.05	2.99	3.09	3.52	3.73	4.11	4.60	4.50	3.93	2.99	3.55	3.61
Thermoelectric	SW	329.20	555.13	778.21	766.67	639.34	745.74	745.87	794.97	913.35	710.52	602.26	677.81	693.70
Agriculture	GW	4.04	5.17	5.91	7.04	9.57	12.55	13.03	13.08	11.63	10.60	6.96	5.38	8.77
Agriculture	SW	0.66	0.58	0.99	1.95	3.31	4.17	4.38	4.35	3.75	2.96	1.06	0.63	2.41
Total	GW	26.37	26.63	28.37	29.48	33.17	37.10	36.90	37.12	35.31	33.42	28.76	27.15	31.68
Total	SW	384.14	606.63	831.87	823.69	701.79	811.76	803.65	862.83	976.09	770.74	719.13	732.31	752.37

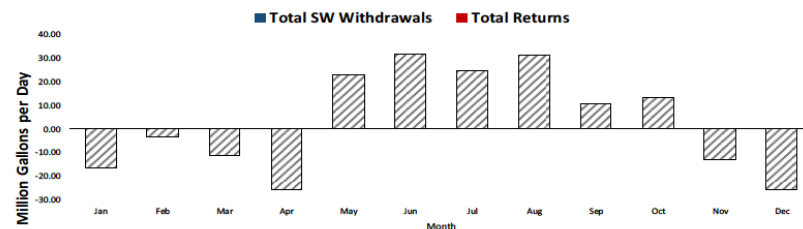
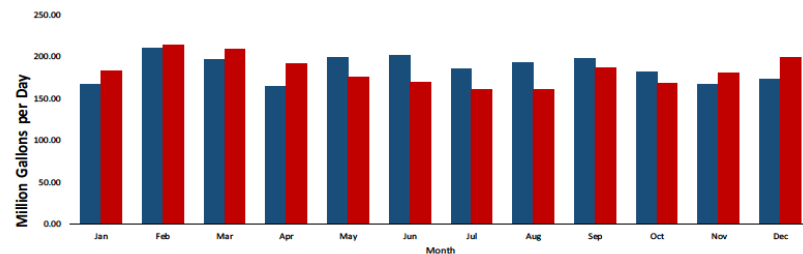
Returns														
Category		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	AVG
Public Supply		43.39	38.12	49.91	59.86	55.19	47.72	30.70	35.49	33.48	39.53	38.15	52.91	43.70
Industrial/Mining		28.27	26.19	40.49	28.44	30.19	31.93	30.45	28.59	28.68	29.95	34.00	30.27	30.63
Thermoelectric		313.08	552.48	785.64	769.40	624.31	725.99	721.15	774.34	904.90	701.99	655.91	667.52	683.06
Agriculture		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Returns		384.74	616.79	876.03	857.70	709.69	805.65	782.31	838.42	967.05	771.47	728.12	750.69	757.39

MOBILE

Total SW Withdrawals	SW	384.14	606.63	831.87	823.69	701.79	811.76	803.65	862.83	976.09	770.74	719.13	732.31	752.37
Total GW Withdrawals	GW	26.37	26.63	28.37	29.48	33.17	37.10	36.90	37.12	35.31	33.42	28.76	27.15	31.68
Withdrawal Total		410.51	633.26	860.24	853.18	734.96	848.87	840.55	899.95	1,011.40	804.15	747.89	759.47	784.05
Total Returns		384.74	616.79	876.03	857.70	709.69	805.65	782.31	838.42	967.05	771.47	728.12	750.69	757.39
Net SW (MGD)	SW	-4.66	-10.16	-44.16	-34.01	-7.90	6.12	21.34	24.41	9.83	-4.73	-8.98	-18.38	-5.33

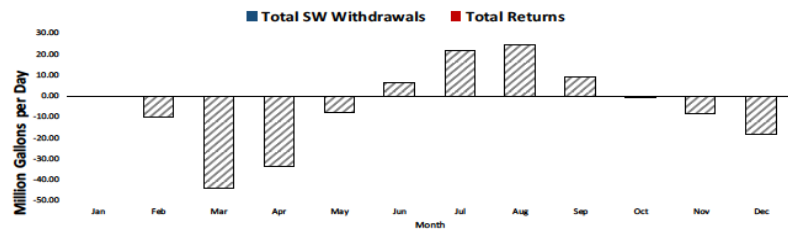
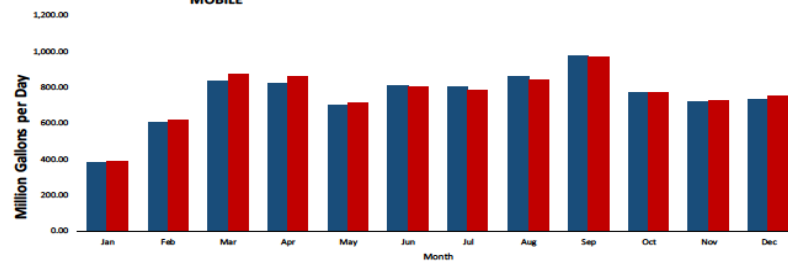
2015 FINAL DATA

03150106-Middle Coosa



Net SW (MGD)

MOBILE



Net SW (MGD)

Streamflow Assessment Methodology

- Development of flows statistics for both 2010 and 2015 for HUC-8 Watersheds
- Flow Dataset Analysis
 - Monthly: January - December
 - Annual Average

HUC-8 Streamflow Analysis

Gage#: 03150106

Name: Middle Coosa

DRAFT

Period of Record:

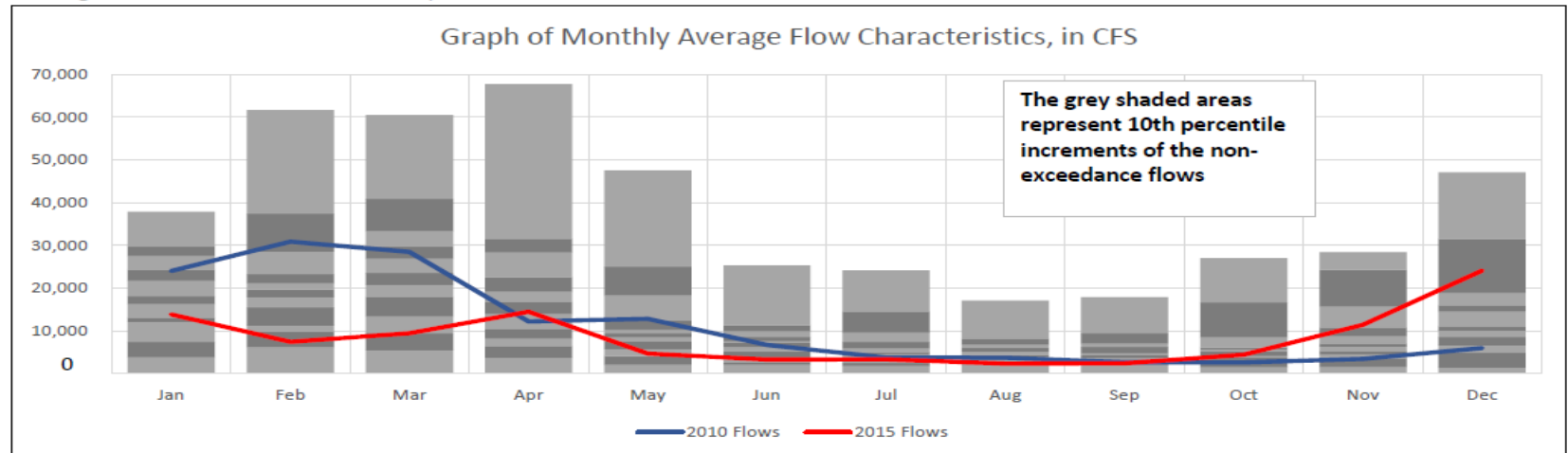
Jan-1975

-

Dec-2014

Drainage Area:

2,582 square miles



MONTHLY AVERAGE AND NON-EXCEEDANCE STATISTICS, in CFS

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average	18,981	21,262	25,090	19,355	12,298	7,698	7,129	5,353	5,674	7,121	10,250	14,859
100%	37,854	61,660	60,471	67,665	47,536	25,332	24,193	17,063	17,894	27,033	28,427	47,111
98%	35,391	45,876	57,135	52,776	35,504	21,636	22,067	12,419	16,644	24,627	28,002	41,490
95%	32,547	40,283	48,170	44,008	26,076	19,614	19,982	10,868	15,107	20,803	27,696	38,117
90%	29,860	37,439	40,836	31,552	24,990	11,333	14,542	8,242	9,496	16,650	24,287	31,530
75%	25,505	25,528	32,327	26,350	14,675	9,585	8,510	6,237	6,434	6,899	12,574	16,166
50%	18,142	19,734	23,578	16,721	9,468	7,269	5,074	4,387	4,361	5,184	7,069	11,073
25%	12,404	13,936	15,813	8,865	6,098	4,194	3,725	3,355	3,408	3,302	5,048	8,027
10%	7,466	9,881	9,481	6,550	4,095	2,746	2,551	2,803	2,710	2,842	3,452	5,038
5%	4,892	7,395	7,243	5,014	3,472	2,425	2,425	2,588	2,645	2,587	3,025	4,391
2%	3,856	6,895	6,116	3,805	3,031	2,276	2,172	2,350	2,456	2,191	2,264	2,958
0%	3,835	6,222	5,507	3,780	2,088	2,063	1,832	2,246	2,181	1,493	1,645	1,474
2010 Flows	24,032	30,877	28,461	12,207	12,827	6,748	3,811	3,718	2,711	2,654	3,481	6,033
2015 Flows	13,890	7,478	9,493	14,480	4,703	3,336	3,378	2,371	2,446	4,444	11,420	24,110

Relative Net Demand (RND)

$$RND = \frac{\textit{Withdrawals} - \textit{Returns}}{\textit{Streamflow}}$$

- 2010 and 2015
- Data tables and maps
- Monthly: January - December
- Seasonal: Jan-Mar / Apr-Jun / Jul-Sep / Oct-Dec
- Annual Average

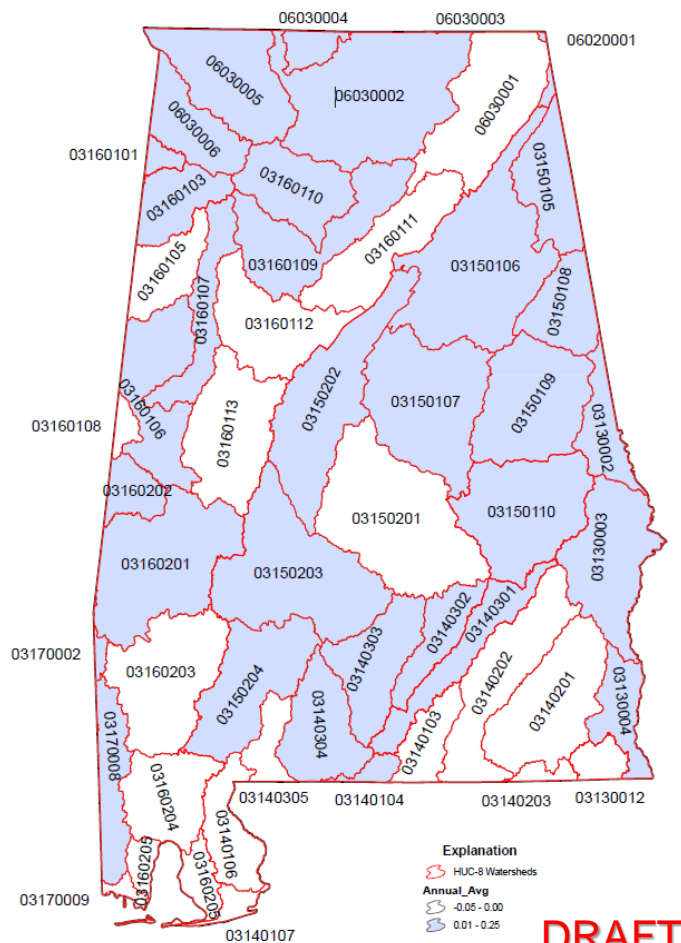
from

Weiskel, P.K, Vogel, R.M., Steeves, P.A., Zarriello, P.J., DeSimone, L.A., and Reis, K.G., III, 2007, Water use regimes—Characterizing direct human interaction with hydrologic systems: Water Resources Research, v. 43, no. 4, W04402, 11p.

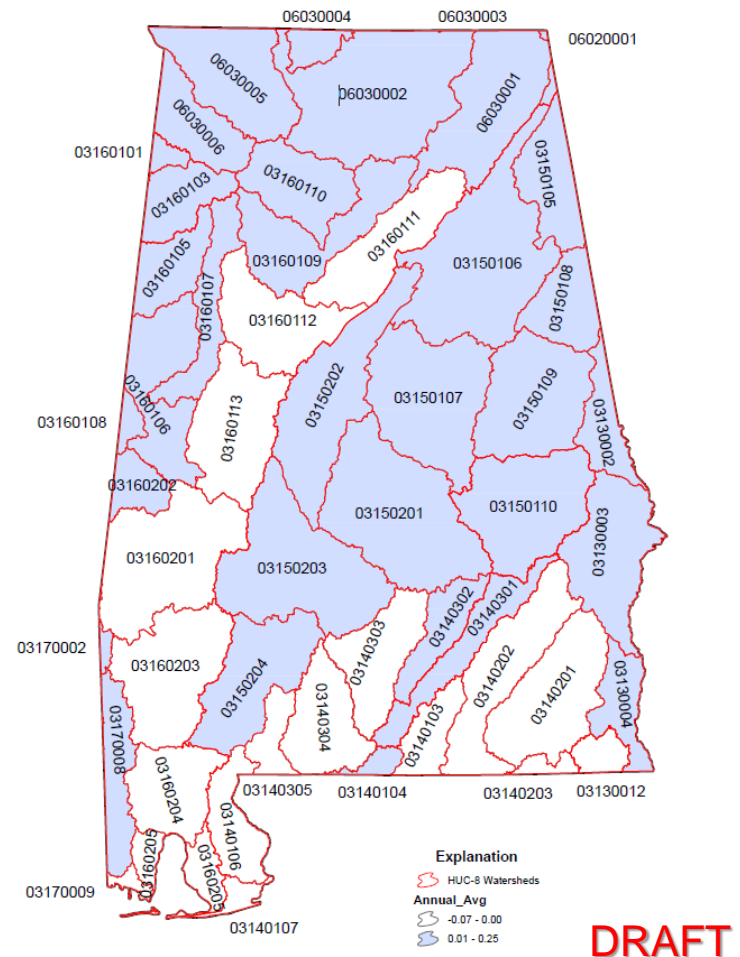
Annual RNDs

2010 and 2015

2010 Annual Average



2015 Annual Average



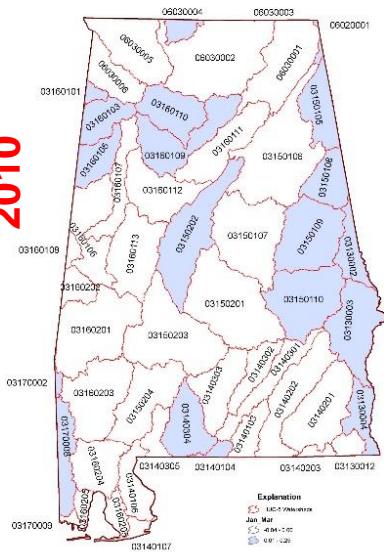
Seasonal RNDs

2010 and 2015

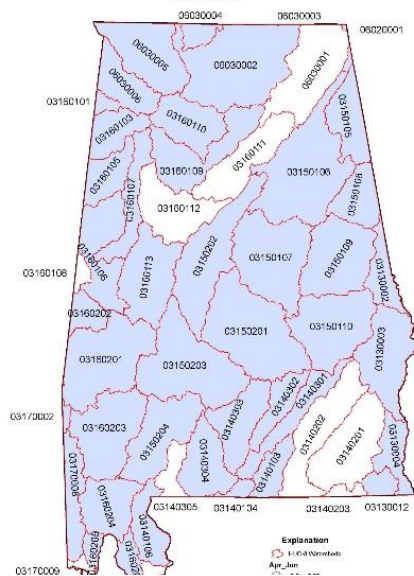
DRAFT

2010

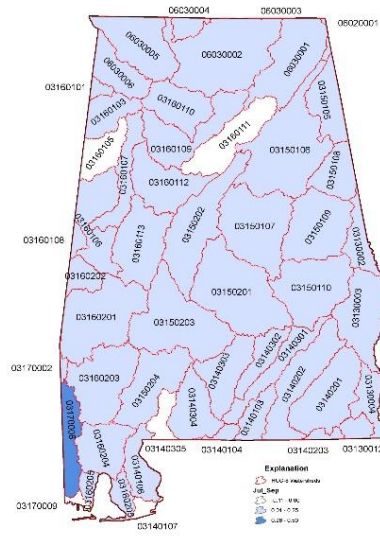
2010 RND



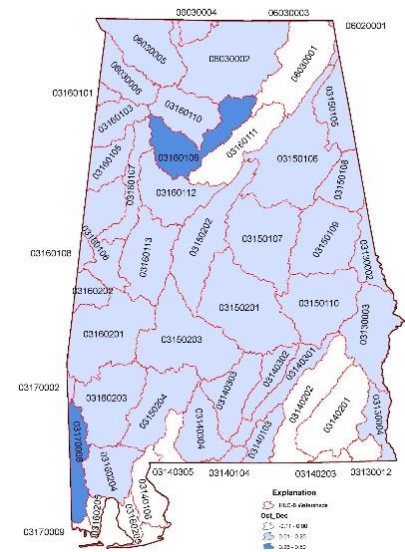
2010 RND



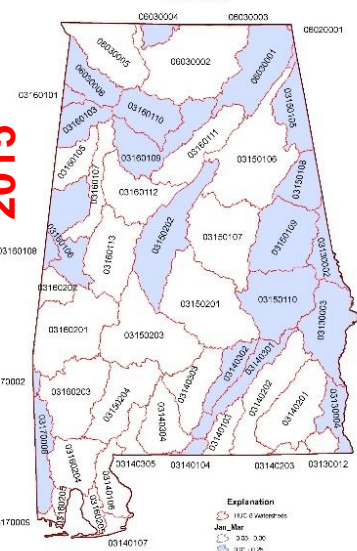
2010 RND



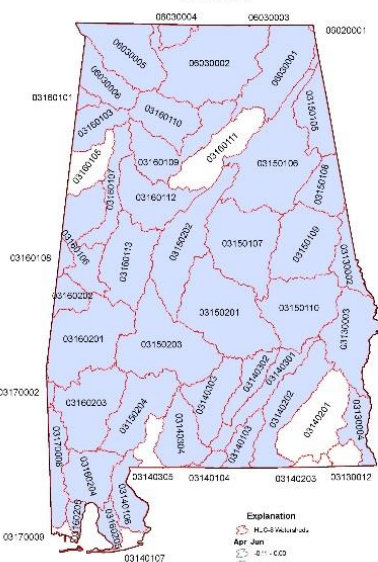
2010 RND



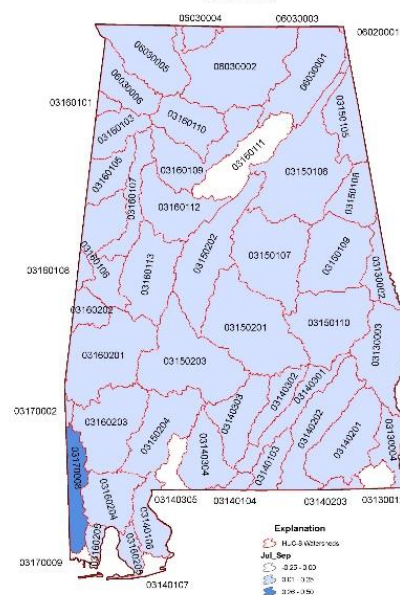
2015 RND



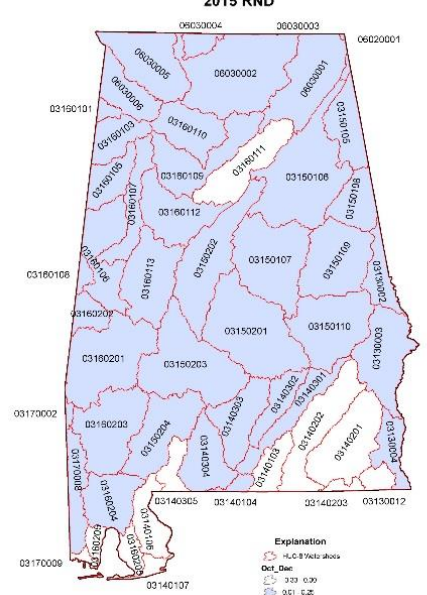
2015 RND



2015 RND



2015 RND



2015

Alabama Water Use Reporting Program Management Application (eWater) Upgrade

eWater Upgrade

- eWater is the data management application used to collect and store information from



Certificate of Use (COU) holders

- Built in 2002-2003 as custom client-server application
- Paper-based process
- No on-line access
- Not upgradeable and must be replaced

eWater Upgrade

➤ Proposed replacement will provide:

- Ability to apply and register new withdrawals on-line
- On-line annual reporting
- External access to your records and documents



eWater Upgrade

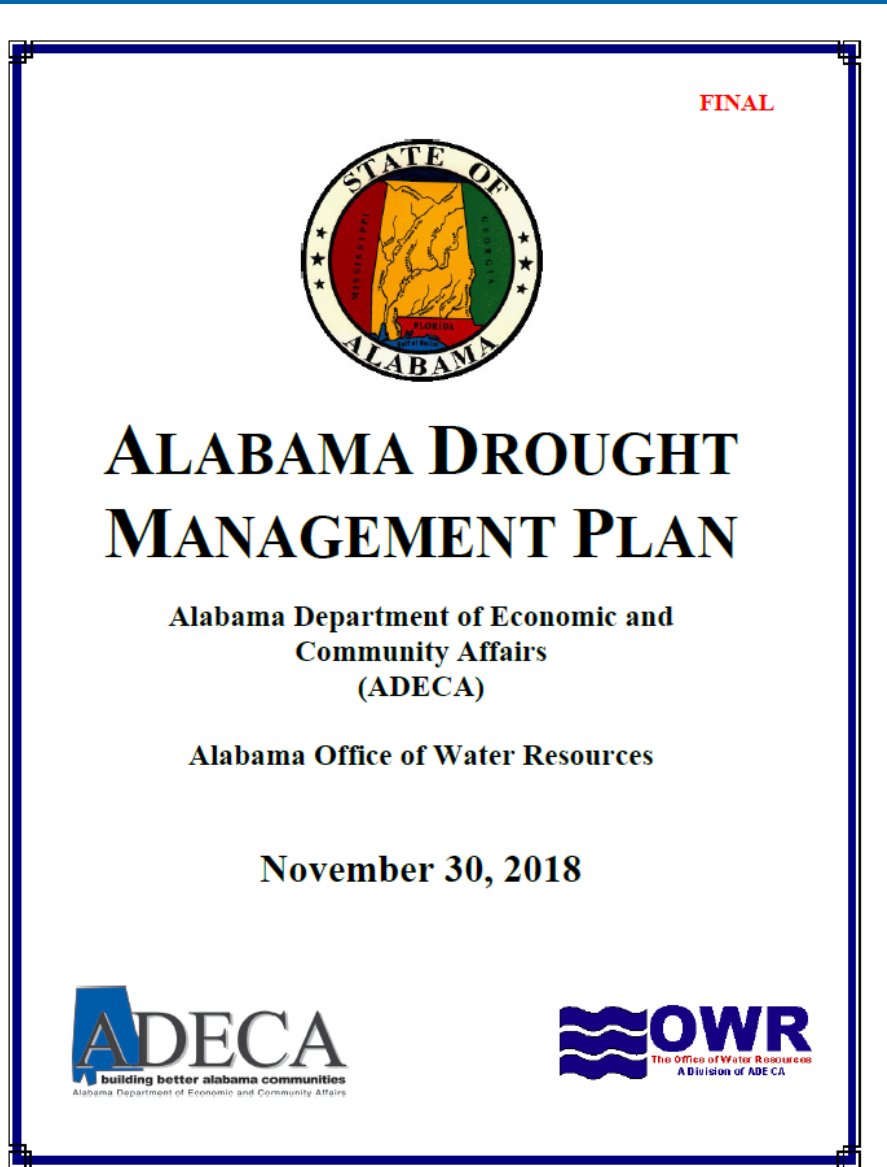
- Proposed replacement will consist of COTS solution (Laserfiche) with Alabama OIT developed portal component
 - Cost efficient
 - Maintainable
 - Will improve process efficiency
 - Estimated to take 2-3 years depending on funding

The Laserfiche logo is displayed within an orange rectangular box. The text "Laserfiche" is in white, with a registered trademark symbol (®) to the upper right of the word. The background of the slide features faint, concentric circular patterns resembling ripples in water.

Laserfiche®

Alabama Drought Management Update

Drought Management Plan Revision



Issued: Nov 30, 2018

Major revision areas:

- Changes to ADAPT and MIG processes
- PWS Drought Plans
- PWS Drought Restriction Reporting
- Reservoir system drought operations
- US Drought monitor input process
- Flexibility in drought declarations
- Water conservation and efficiency

Available on OWR website



OWR Drought Web Site (http://water.alabama.gov)



Google Custom Search



ABOUT ▾

DIVISIONS ▾

NEWS ▾

Divisions

► Community and Economic Development

► Energy

► Law Enforcement and Traffic Safety

► Office of Water Resources

► Floodplain Management

► **Drought Planning and Management in Alabama**

► Water Management

► Interstate Water Issues

► Alabama Water Resources Commission

► Surplus Property

► Opportunity Zones Program

► Support Sections

► Governor's Office of Volunteer Services

ADECA > Divisions > Office of Water Resources > Drought Planning and Management in Alabama



Drought Planning and Management in Alabama



The goal of Alabama's drought planning and management process is to ensure accurate and consistent information concerning hydrologic and drought conditions, impacts, and forecasts around the state. Further, through the use of an extensive communication and coordination process and state Drought Declarations, ADECA's Office of Water Resources (OWR) helps water managers, stakeholders, and other users understand where and how severe drought conditions exist and the best available information concerning forecasted changes.

(Photo: Pier at Lake Martin in 2007)

[Click here for the most recent Drought Declaration.](#)

[Click here for the most recent Drought Impact Summary.](#)

[Click here to access the Drought GIS Portal.](#)

[Click here for the Alabama Drought Plan.](#)

What is your drought condition?

How is drought affecting you? Enter your zip code for current conditions:

Zip Code (5 digit):

Go!

Click below for more drought information:

[Alabama Drought Planning and Response Act](#)

[Alabama Drought Planning Organizational Structure](#)

[Alabama Drought Plan](#)

[Alabama Drought Information Center](#)

[Water Conservation](#)

[Contact](#)

Alabama Drought Planning and Response Act

OWR GIS Drought Streamflows Portal

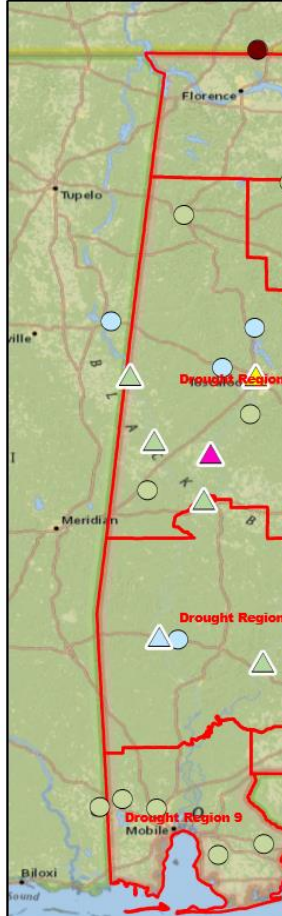
- Total of 72 gages tracked weekly
 - Unregulated USGS gages - 47 gages
 - Regulated USGS gages - 25 gages
- 7-, 30-, 60-, and 90-day rear looking average streamflow based on period of record for each gage up to the previous Monday
- Shows graphical summary of flows, exceedance statistics, and monthly flow characteristics
- <https://adecagis.alabama.gov/owrdataportal>

OWR GIS Drought Streamflows Portal

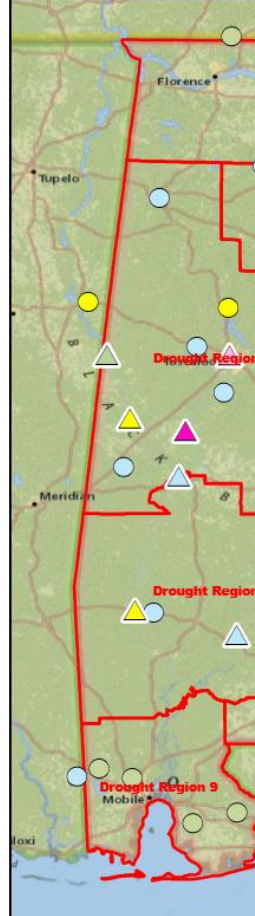
7 Day Average



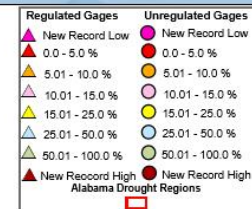
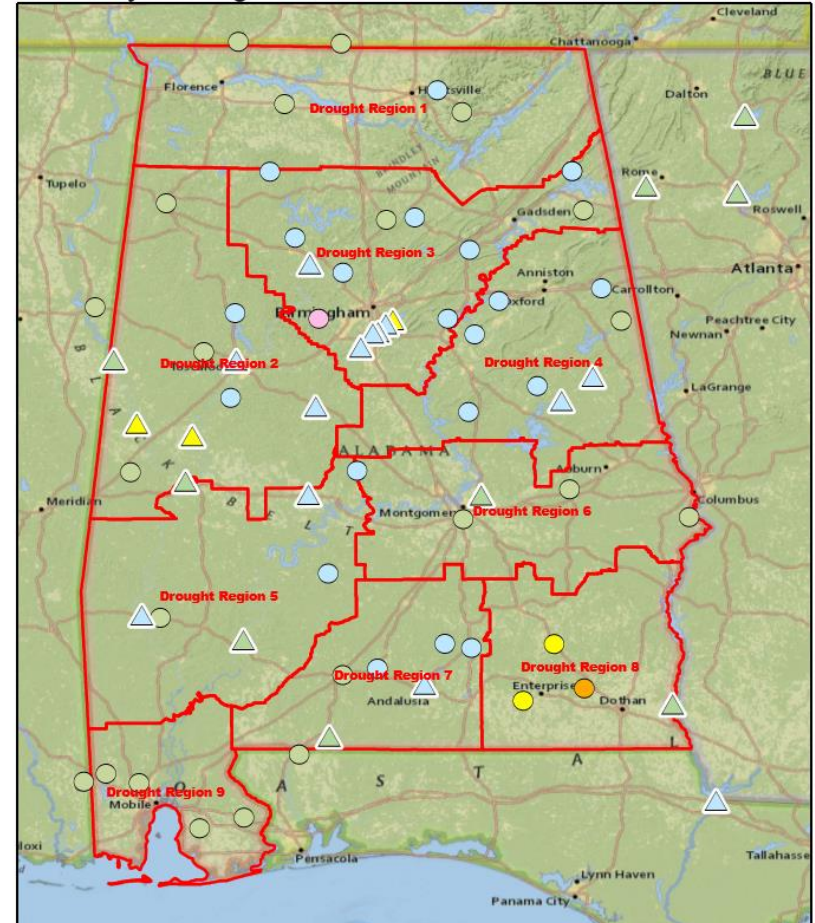
30 Day Average Flow

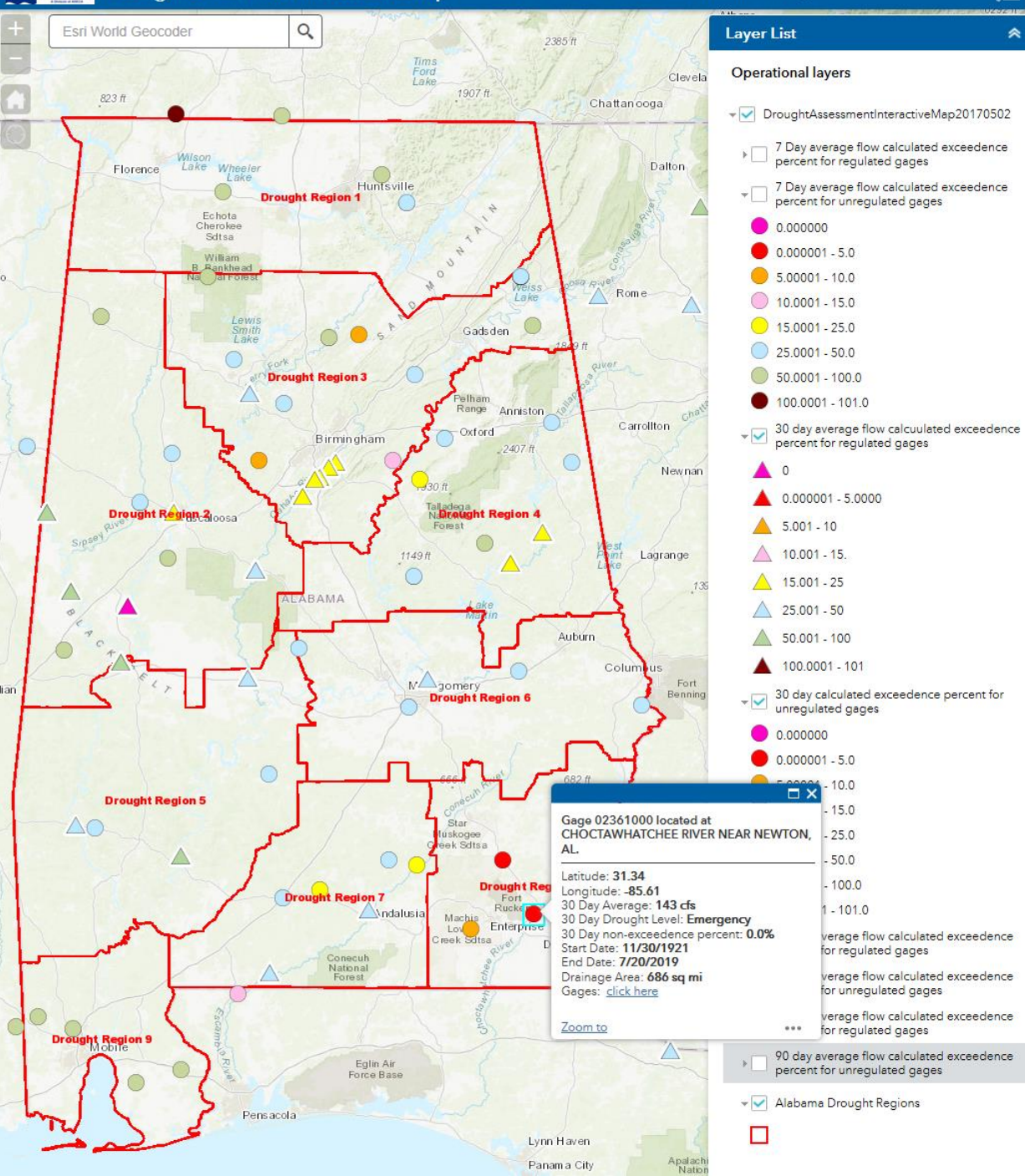


60 Day Average



Drought Monitor Map
90 Day Average Flow Calculated Exceedance Percent





OWR GIS Drought Data Portal

(<http://adecagis.alabama.gov/DroughtMap/>)

Example: USGS # 02361000 – Choctawhatchee R. near Newton (Updated 7/22/2019)

Gage #: 02361000
Period of Record: 12/1/1921 - 7/21/2019

Gage #: 02361000
Period of Record: 12/1/1921 - 7/21/2019
Average Flow: 703 cfs

Gage #: 02361000
Period of Record: 12/1/1921 - 7/21/2019

Name: CHOCTAWHATCHEE RIVER NEAR NEWTON, AL.
Period of Record: 12/1/1921 - 7/21/2019

Monthly Analysis
Statistics of Monthly Average Flows

Drought Level
Warning

7 Day Average Flow (cfs)

1000
100
10

Percent
Discharge

2

7-Day Minimum Discharge in cfs

500
450
400
350
300
250
200
150
100
50
0

1922
1923

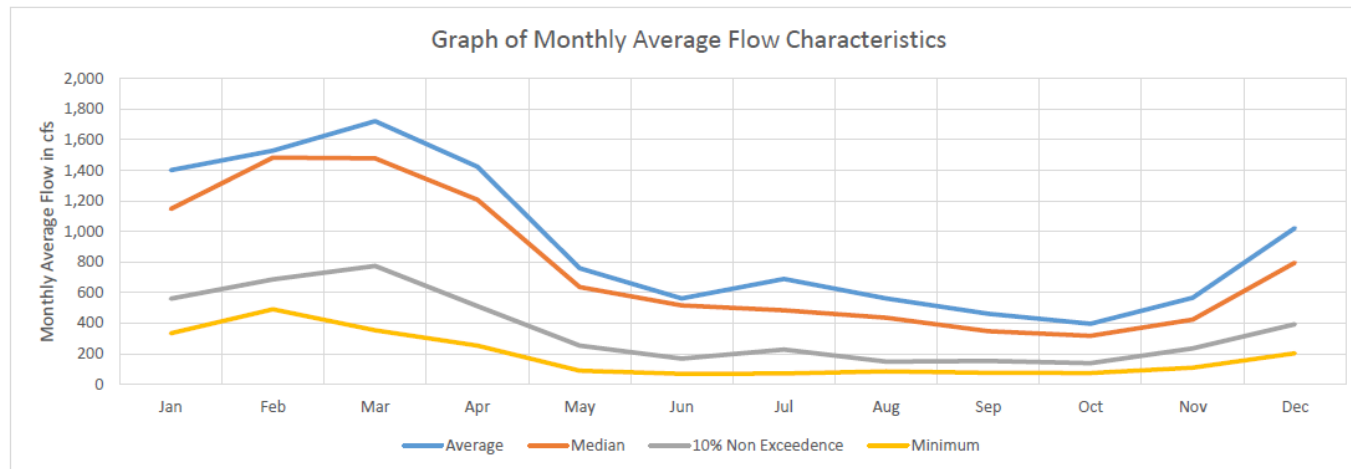
Drought Level
Emergency

60 Day Average Flow (cfs)

1000
100
10

Legend:

*Disclaimer: U



MONTHLY STATISTICS

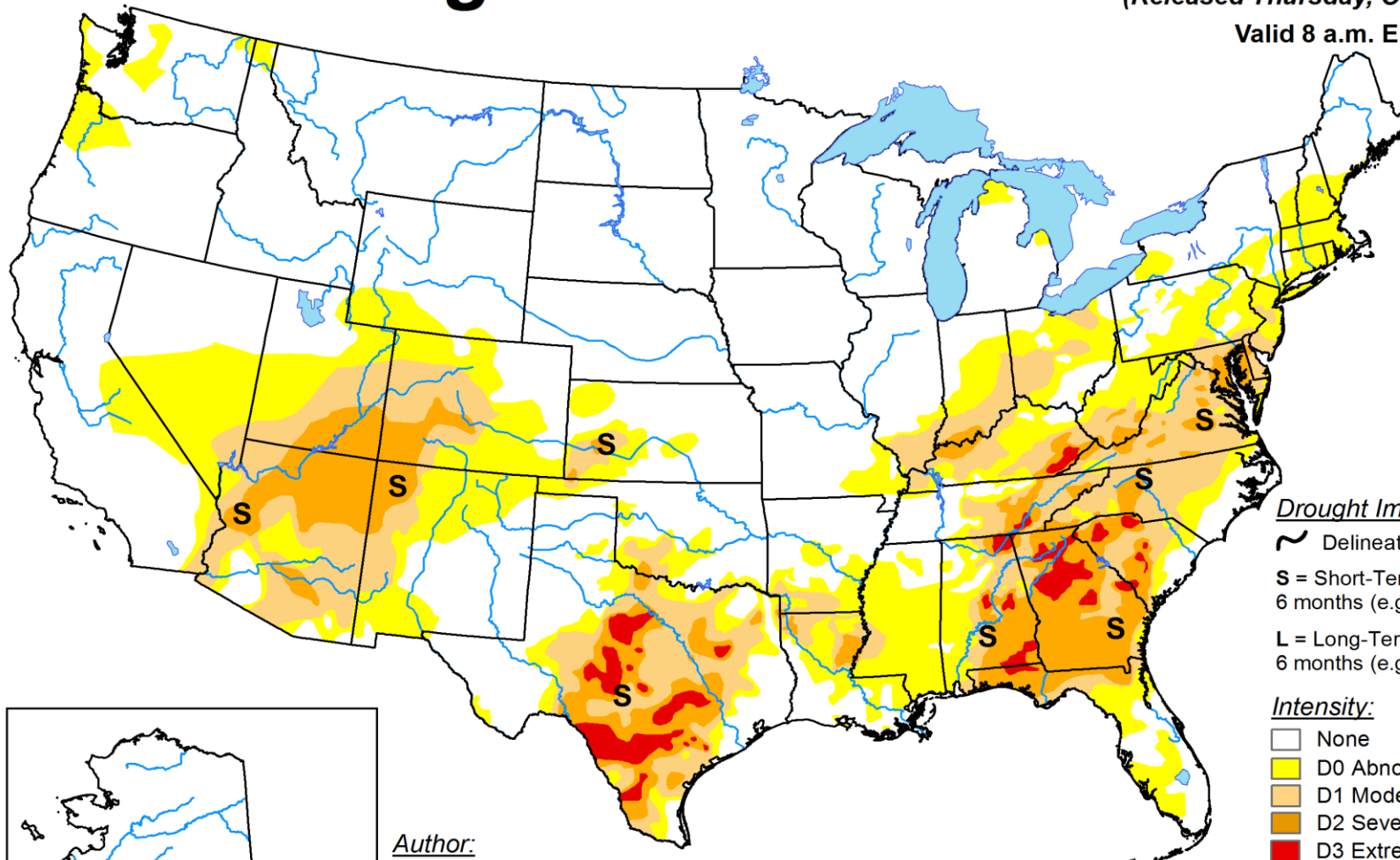
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average	1,401	1,529	1,722	1,424	760	562	689	562	461	396	567	1,022
100%	5,739	2,862	5,926	4,323	2,619	1,667	7,668	2,384	2,274	1,707	2,641	5,236
98%	3,836	2,786	4,174	3,849	2,304	1,469	2,201	1,841	1,621	1,431	1,865	3,336
95%	3,061	2,666	3,186	2,874	1,835	1,308	1,438	1,502	1,041	974	1,672	2,334
90%	2,683	2,523	2,909	2,598	1,467	946	1,271	1,256	856	750	986	1,966
75%	1,717	1,930	2,189	1,937	945	747	750	672	614	470	616	1,189
50%	1,147	1,484	1,478	1,208	636	516	485	436	347	317	423	796
25%	782	1,017	1,099	804	396	277	327	256	203	195	288	543
10%	560	687	774	512	252	168	227	148	152	138	234	393
5%	395	566	740	410	209	118	140	137	112	113	183	320
2%	337	534	565	345	161	80	111	93	98	86	134	272
0%	334	491	353	253	89	69	70	84	75	73	108	204

U.S. Drought Monitor

October 15, 2019

(Released Thursday, Oct. 17, 2019)

Valid 8 a.m. EDT



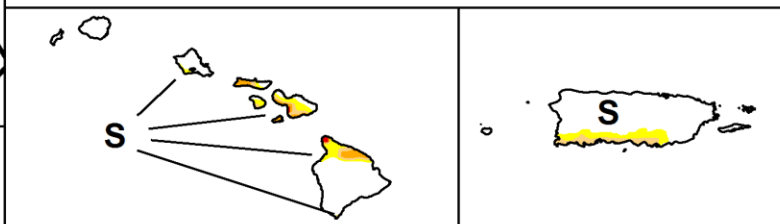
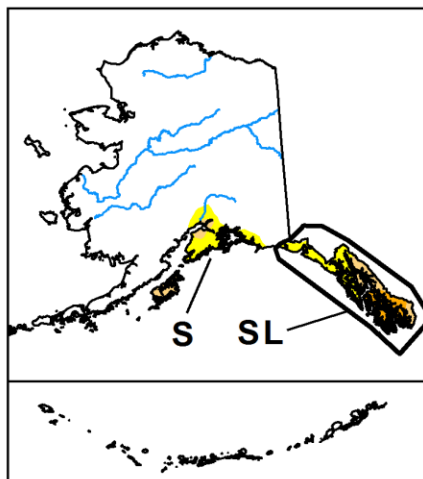
Drought Impact Types:

- ~ Delineates dominant impacts
- S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

Author:
Richard Heim
NCEI/NOAA



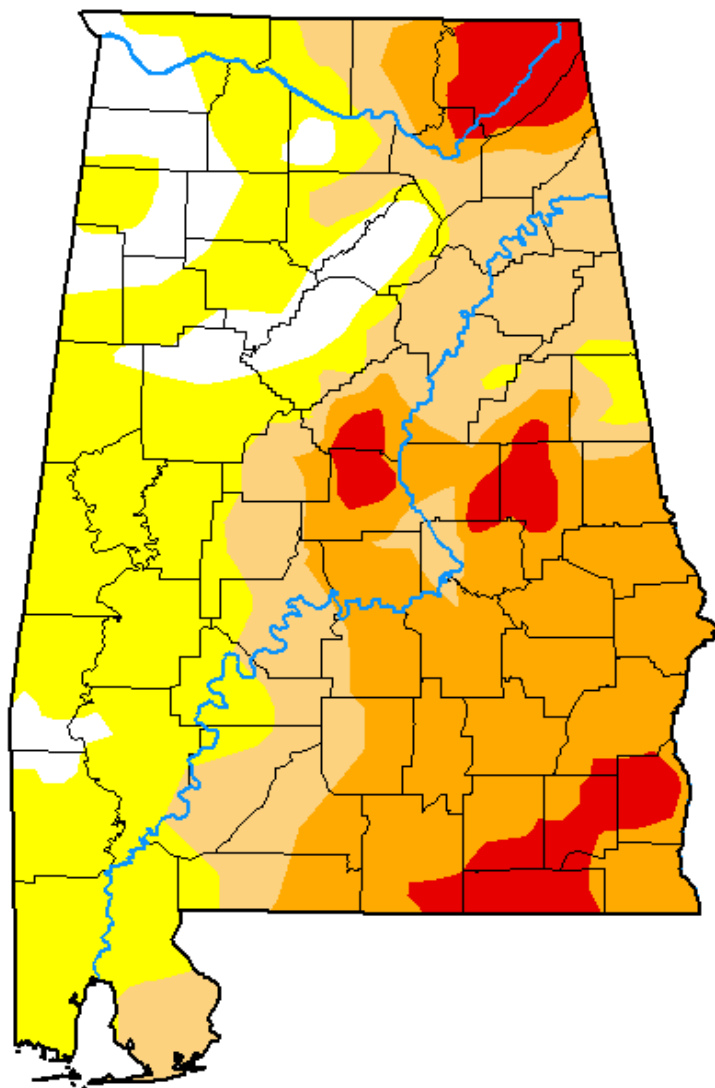
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



droughtmonitor.unl.edu

U.S. Drought Monitor

Alabama



October 15, 2019

(Released Thursday, Oct. 17, 2019)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	9.44	90.56	57.51	34.96	7.79	0.00
Last Week <i>10-08-2019</i>	8.50	91.50	54.08	14.45	5.39	0.00
3 Months Ago <i>07-16-2019</i>	60.50	39.50	10.57	3.68	0.00	0.00
Start of Calendar Year <i>01-01-2019</i>	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year <i>10-01-2019</i>	0.00	100.00	35.36	11.99	3.54	0.00
One Year Ago <i>10-16-2018</i>	81.32	18.68	0.22	0.00	0.00	0.00

Intensity:

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

Richard Heim
NCEI/NOAA



droughtmonitor.unl.edu



Release Date: October 17, 2019



For Public Dissemination Alabama Drought Declaration

In accordance with the Alabama Drought Planning and Response Act (Code of Ala. 1975, §9-10C-1, et seq.) and the Alabama Drought Management Plan, the ADECA Office of Water Resources (OWR), based on a review of current and anticipated conditions, has declared the following portions of Alabama to be under the specified drought declaration levels.

Declaration Level

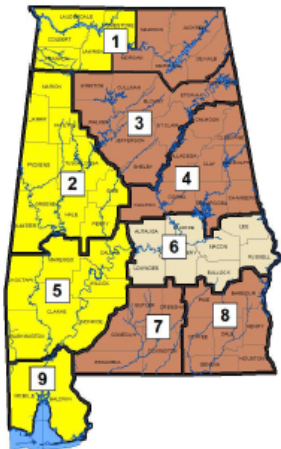
Emergency None

Warning Regions 1 (partial), 3, 4, 7, and 8 of the Alabama Drought Management Plan which include the counties of: Barbour, Blount, Butler, Calhoun, Chambers, Cherokee, Chilton, Clay, Cleburne, Coffee, Conecuh, Coosa, Covington, Crenshaw, Cullman, Dale, DeKalb, Escambia, Etowah, Geneva, Henry, Houston, Jackson, Jefferson, Madison, Marshall, Morgan, Pike, Randolph, Shelby, St. Clair, Talladega, Tallapoosa, Walker, and Winston

Watch Region 6 of the Alabama Drought Management Plan which include the counties of: Autauga, Bullock, Elmore, Lee, Lowndes, Macon, Montgomery, and Russell

Advisory Regions 1 (partial), 2, 5, and 9 of the Alabama Drought Management Plan which include the counties of: Baldwin, Bibb, Choctaw, Clarke, Colbert, Dallas, Fayette, Franklin, Greene, Hale, Lamar, Lauderdale, Lawrence, Limestone, Marengo, Marion, Mobile, Monroe, Perry, Pickens, Sumter, Tuscaloosa, Washington, and Wilcox

None None



Legend
No Drought Declaration
Advisory
Watch
Warning
Emergency

Recent rainfall has helped with drought conditions, primarily in the western parts of the state. The eastern portion of the Tennessee Valley (Region 1) as well as Regions 3, 4, 7, and 8 continue to experience dry conditions that have impacted the agriculture and forestry sectors especially hard.

Water system managers are urged to carefully monitor water sources and implement water conservation measures as needed. Please report any restrictions to OWR. Public water system customers are encouraged to follow their local water system's recommendations regarding water use. All other water users should make prudent decisions on their water use to protect available water resources.

For further information, please visit our web site at www.water.alabama.gov and follow the links for Drought Planning and Management. You may also reach our office at (334) 242-5499, fax at (334) 242-0776, or e-mail at water@adeca.alabama.gov.

Current Alabama Drought Declaration

October 17, 2019



Next Meetings

➤ **MIG Meeting:**

Tuesday, Nov. 5, 2019 @ 1:00 pm

➤ **ADAPT Meeting:**

Thursday, Nov. 7, 2019 @ 10:00 am

Questions?

Michael Harper

Alabama Office of Water Resources

Email:

michael.harper@adeca.alabama.gov

Web: <http://water.alabama.gov>

**Phone: Toll Free 1-877-ALAWATER
(1-877-252-9283) or (334) 242-5499**

FAX: (334) 242-0776